

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311618

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA08-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P311618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L82765-S-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5322.0 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

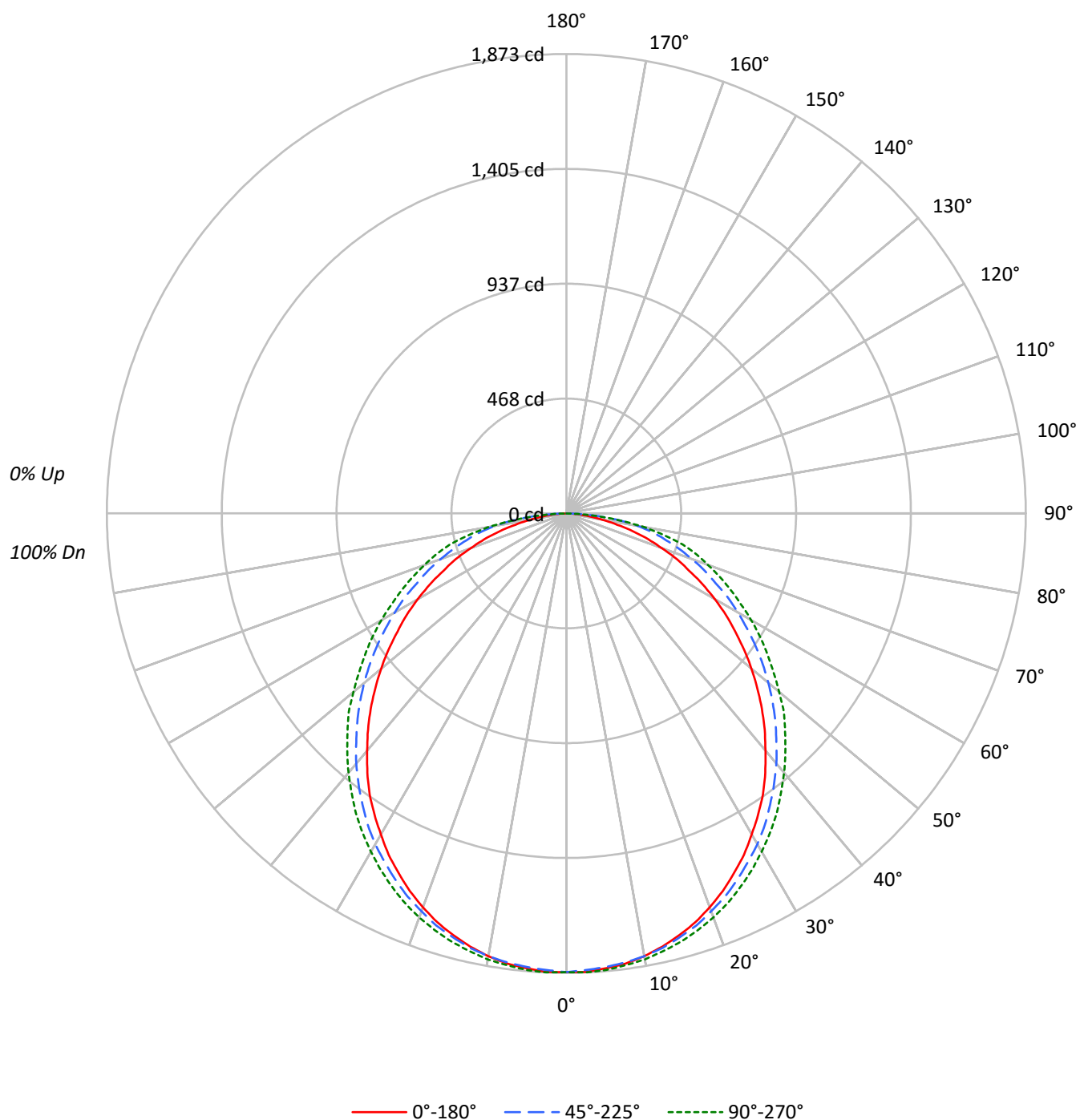
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83		
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69		
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58		
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42		
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37		
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33		
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2516	2516	2516
5°	2514	2507	2523
10°	2504	2504	2522
15°	2480	2491	2517
20°	2447	2471	2510
25°	2402	2447	2495
30°	2348	2419	2474
35°	2296	2380	2455
40°	2218	2340	2426
45°	2145	2293	2400
50°	2063	2250	2371
55°	1971	2209	2348
60°	1879	2174	2343
65°	1760	2137	2357
70°	1629	2148	2421
75°	1459	2188	2557
80°	1179	2318	2502
85°	888	2036	1984



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.0	3.3
10°-20°	505.8	9.5
20°-30°	760.3	14.3
30°-40°	905.6	17.0
40°-50°	926.8	17.4
50°-60°	834.4	15.7
60°-70°	655.3	12.3
70°-80°	425.3	8.0
80°-90°	131.5	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1443.0	27.1
0°-40°	2348.6	44.1
0°-60°	4109.9	77.2
0°-90°	5322.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5322.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1870	1870	1870	1870	1870	
5°	1861	1865	1856	1866	1868	177
15°	1780	1785	1788	1804	1807	502
25°	1618	1631	1648	1675	1680	745
35°	1398	1415	1449	1484	1494	872
45°	1128	1155	1205	1251	1261	869
55°	840	877	942	991	1001	753
65°	553	595	671	727	740	550
75°	281	335	421	478	492	297
85°	58	106	132	128	128	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1869.7	1869.7	1869.7	1869.7	1869.7
2.5°	1871.3	1871.3	1862.9	1871.3	1873.0
5°	1861.2	1864.6	1856.1	1866.3	1868.0
7.5°	1851.1	1851.1	1846.0	1856.1	1857.8
10°	1832.5	1834.2	1832.5	1844.3	1846.0
12.5°	1808.8	1812.2	1813.9	1825.7	1827.4
15°	1780.1	1785.1	1788.5	1803.7	1807.1
17.5°	1747.9	1753.0	1761.5	1778.4	1781.7
20°	1709.1	1715.8	1726.0	1747.9	1753.0
22.5°	1666.8	1673.6	1690.5	1710.7	1719.2
25°	1617.8	1631.3	1648.2	1675.2	1680.3
27.5°	1568.8	1580.6	1602.6	1631.3	1638.1
30°	1511.3	1529.9	1556.9	1585.7	1592.4
32.5°	1455.5	1474.1	1506.2	1536.6	1545.1
35°	1398.0	1414.9	1448.7	1484.2	1494.4
37.5°	1332.1	1354.1	1391.3	1426.8	1436.9
40°	1262.8	1289.8	1332.1	1369.3	1381.1
42.5°	1196.8	1225.6	1267.8	1308.4	1321.9
45°	1127.5	1154.6	1205.3	1250.9	1261.1
47.5°	1056.5	1087.0	1141.1	1186.7	1203.6
50°	985.5	1017.7	1075.1	1122.5	1132.6
52.5°	914.5	948.4	1009.2	1059.9	1065.0
55°	840.2	877.4	941.6	990.6	1000.8
57.5°	772.5	804.7	874.0	924.7	936.5
60°	698.2	733.7	808.0	855.4	870.6
62.5°	627.2	664.4	742.1	789.4	803.0
65°	552.8	595.0	671.1	726.9	740.4
67.5°	488.5	529.1	610.3	664.4	677.9
70°	414.2	459.8	546.0	601.8	615.3
72.5°	349.9	397.3	483.5	537.6	557.9
75°	280.6	334.7	420.9	478.4	491.9
77.5°	213.0	275.5	363.4	407.4	407.4
80°	152.1	218.1	299.2	319.5	322.9
82.5°	99.7	164.0	221.5	219.8	219.8
85°	57.5	106.5	131.9	128.5	128.5
87.5°	22.0	44.0	47.3	47.3	45.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)